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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/519,428

12/22/2004

Pavel Koren

459/1

7524

24101

7590

10/30/2006

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EXAMINER

HRUSKOCI, PETER A

ART UNIT

PAPER NUMBER

1724

DATE MAILED: 10/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/519,428	<b>Applicant(s)</b> KOREN ET AL.	
	<b>Examiner</b> Peter A. Hruskoci	<b>Art Unit</b> 1724	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                             |                                                                                         |
|-------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                 | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____                                                |

Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 1 “single step” appears to be misdescriptive since the precipitation process in claim 2 includes steps a-e. Claim 1 is considered incomplete because it is essential to the instant method that the precipitation process include positive steps for providing a source of iron ions, providing a source of OH<sup>-</sup> ions, adding the iron ions to the aqueous medium, adding OH<sup>-</sup> ions to the aqueous solution, and precipitating the solid ferrites from the aqueous solution. In claims 13 and 14 “conventional” is vague and indefinite because it is unclear how this term further limits the claim. Claims 2-12 depend from the above claims.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-9 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu 5,685,993 in view of Watson 4,940,550. Liu disclose (see col. 5 line 18 through col. 8 line 44) a method for removing ions of heavy metals from an aqueous solution substantially as claimed. The claims differ from Liu by reciting that the method is a single step precipitation process carried out in the presence of a specific magnetic field. Watson disclose (see col. 1 line 54 through col. 2 line 59, and col. 4 line 13 through col. 6 line 21) that it is known in the art to apply a magnetic field to a treatment tank for aqueous solutions or sludges containing magnetic particles mixed with a flocculant, to aid in aggregating and separating the particles. It would have been obvious to one skilled in the art to modify the method of Liu by utilizing the recited

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magnetic field in view of the teachings of Watson, to aid in aggregating and separating the ferrites. The specific number of precipitation steps, magnetic strength, iron source, pH, and weight ratio utilized, would have been an obvious matter of process optimization to one skilled in the art, depending on the specific aqueous solution treated and results desired, absent a sufficient showing of unexpected results.

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu 5,685,993 in view of Watson 4,940,550 as above, and further in view of Cort 6,896,815. The claims differ from the references applied above by reciting that the seed material comprises magnetite, and the method comprises recirculation of a portion of the separated ferrites. Cort disclose (see col. 12 line 24 through col. 16 line 37) that it is known in the art to utilize magnetite as a seed material for heavy metal precipitation, and to recirculate the separated precipitate to improve flocculation of precipitated particles. It would have been obvious to one skilled in the art to modify the references as applied above, by utilizing the recited seed material and recirculation in view of the teachings of Cort, to aid in precipitating and flocculating the ferrites.


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter A. Hruskoci whose telephone number is (571) 272-1160. The examiner can normally be reached on Monday through Friday from 6:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Peter A. Hruskoci  
Primary Examiner  
Art Unit 1724

10/13/06